THINKCENTRE
Tiny-In-One 23
TECHSPECS

ThinkCentre® Tiny-in-One 23 (TIO) offers a full AIO experience with clean cabling, and effortless setup. Compatible with all current generation Tiny products, TIO also delivers unparalleled configurability. Tiny is simply slotted into the back of the monitor and that means CPU and monitor can be maintained and upgraded individually – no need to replace or repair the entire system. Perfect for large organizations and any space-constrained environment.

Product Name	Tiny-In-One 23
Form Factor	23 Inch TIO
LCD Panel	
Panel Size	23inch
Aspect Ratio	16:9
Resolution	1920x1080
Viewable Area	23inch/584.2mm
Screen Dimensions (WxH)	509.2mm x286.4.0mm
Pixel Pitch	0.265mm
Dot/Pixel Per Inch (DP/PPI)	95.8
Brightness(Typical)	250cd/m2
Contrast Ratio(Typical)	'1000:1
Dynamic Contrast Ratio(Typical)	N/A
Viewing Angle (H/V at CR 10:1)	170/160
Response Time(Typical)	5ms
Panel Type(TN,IPS)	TN
Color Gamut NTSC (CIE1931)	72%
Numbers of Color	16.7M
Processor LUT	8bit/6bit
Mechanical	
Tilt Angle (Front/Back)	-5°/35°
Swivel Angle (Left/Right)	+/-45°
Lift	110mm
Pivot	N/A
VESA Mount	Yes(100mm)
Kensington® Lock Slot	Yes
USB 3.0	2 USB 3.0 Port
USB 2.0	2 USB 2.0 Port
	1mini USB 2.0 Port for Accessory
Speaker	N/A
Audio Out	Yes(3.5mm)

Signal Input	
Video Signals	DP1.2
Connection with Tiny	DP1.2/USB3.0/DC-Power-20V
Cables Supplied	N/A
Plug 'n' Play	Y
Preset Display Modes	25
User-defined Display Modes	25
OSD Buttons	5
OSD Languages	8
Lockable Controls	Y
Certifications	ULE (Ready in Nov/14)
	TCO
	TCO Edge
	EPEAT (Ready in Oct/14)
	6.0 Energy Star Rating
	Windows Certification
	China Energy Ladder 1
	TUV Green Mark (Ready in Nov/14)
	PCC
Resolution	
23" Wide LED LCD 1920x1080	Max:1920x1080 @ 60Hz
Items	
Backlight(WLED,CCFL)	WLED
Horizontal Frequency	30 to 83KHz
Vertical Frequency	30 to 75Hz
Preset/User Modes	25/25
Temperature-Operating	0-40°C
Temperature-Non-operating	-20-60°C
Humidity-Operating	8-80%
Humidity-Non-operating	10-90%
Warranty	3 Year
Packaging	
Height	209mm
Width	634mm
Depth	466mm

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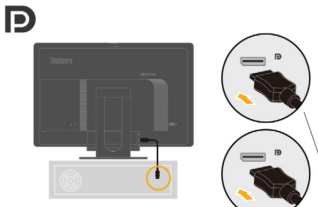
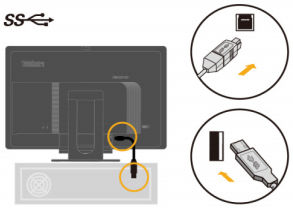
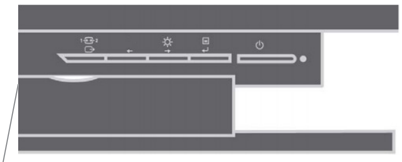


Side: DP in



Side: USB3.0 in Source2

Front



OSD LED Definition

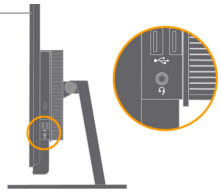
Control: Input Change
Description:
Switches the Video/USB Input Source

Control: Brightness Change
Description:
Direct Access to Brightness Adjustment

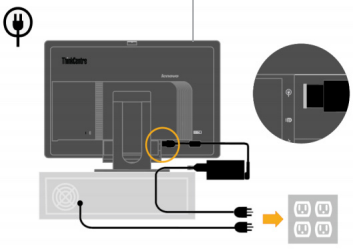
Control: Main Menu
Description: Open OSD Main Menu

Control: PC Button/Monitor Button
Description:
Green LED on in AIO Power on Mode/ Monitor on Mode
Green LED Blinking in AIO Sleep Mode
Yellow LED on in Monitor Sleep Mode

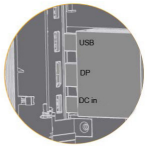
Front: USB3.0 x 2



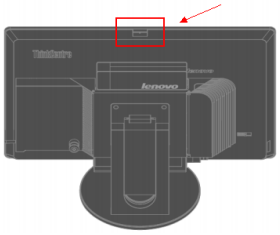
Side: USB2.0 x 2, Combined Audio Jack



Side: DC in



Back: 3in1 cable: DP source 1, USB3.0 Source 1; DC-in to PC



Top: Mini USB 2.0x1

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Compatible with the following Tinys.

Product Name	ThinkCentre M93	ThinkCentre M83	ThinkCenter M73	ThinkCenter M53
Form Factor	Tiny			
Operating System	Windows® 8.1 Windows® 8.1 Pro Windows® 8.1 Single Language(EM) Windows® 8.1 Chinese Language Edition (Limited Distribution for China) Win7 SP1 with IE 11 Pro 32bit/64bit			DOS: No image Windows 7 Pro 64bit Win8.1 64bit Win8.1 64bit China Win8.1 64bit Single Language-EM Win8.1 with Bing 64bit Win8.1 with Bing 64bit China Win8.1 with Bing 64bit Single Language-EM Win8.1 Pro 64bit
Chipset	Intel® Q87	Intel Q85 Chipset	Intel H81	No Chipset
Processor				
Intel Core I7	Intel® Core i7-4765T Intel® Core i7-4785T			
Intel Core I5	Intel® Core i5-4570T Intel® Core i5-4590T	Intel® Core i5-4570T Intel® Core i5-4460T Intel® Core i5-4590T		
Intel Core I3	Intel® Core i3-4150T Intel® Core i3-4350T Intel® Core i3-4330T Intel® Core i3-4130T	Intel® Core i3-4150T Intel® Core i3-4350T Intel® Core i3-4330T Intel® Core i3-4130T		
Pentium	Intel® Pentium G3440T Intel® Pentium G3240T Intel® Pentium G3220T Intel® Pentium G3420	Intel® Pentium G3440T Intel® Pentium G3240T Intel® Pentium G3220T Intel® Pentium G3420T		Intel® Pentium J2900
Celeron	Intel® Celeron 1840T Intel® Celeron G1820T	Intel® Celeron 1840T Intel® Celeron G1820T		Intel® Celeron J1800
Memory				
Module Spec	1600MHz DDR3 SODIM			1333MHz DDR3 SODIM
DIMM Slots	2 SODIMM			1SODIMM
Module Type Supported	2GB/4GB/8GB			
Graphics	Intel® Integrated			
Peripherals				
Keyboard	USB Lenovo Fingerprint Keyboard LI Only USB Preferred Pro Fullsize Keyboard 103P			
Mouse	Optical Wheel Mouse-1000dpi			
Wireless Input	Wireless Keyboard and Mouse			
Hard Drive				
Available Drive	2.5'' OPAL SSC HDD 320G 2.5'' 128G SSD,Standard SATA interface 2.5'' 180G SSD,Standard SATA interface 2.5'' 240G SSD,Standard SATA interface 2.5'' 256G SSD,Standard SATA interface 2.5'' 500G 5400 RPM HDD,Standard SATA interface 2.5'' 320G 5400 RPM HDD,Standard SATA interface 2.5'' 750G 5400 RPM HDD,Standard SATA interface 2.5'' 1TB 5400 RPM HDD,Standard SATA interface 500GB,8GB Hybrid HDD,SATA		2.5'' OPAL SSC HDD 320G 11202133 Ramaxel 8G-20nm SATA MLC DOM 11202134 Sharetronic 8G-25nm SATA MLC DOM 11202795 Ramaxel 16G-20nm SATA3 MLC DOM(+screw) 2.5'' 8G SSD,Standard SATA interface 2.5'' 128G SSD,Standard SATA interface 2.5'' 180G SSD,Standard SATA interface 2.5'' 240G SSD,Standard SATA interface 2.5'' 256G SSD,Standard SATA interface 2.5'' 500G 5400 RPM HDD,Standard SATA interface 2.5'' 320G 5400 RPM HDD,Standard SATA interface 2.5'' 750G 5400 RPM HDD,Standard SATA interface 2.5'' 1TB 5400 RPM HDD,Standard SATA interface 500GB,8GB Hybrid HDD,SATA	
Supported Types	Serial-ATA 3.0			
Bus Transfer Rate	6.0Gb/s			
Optical Drive				
Available Types	Slim DVD Recorder Rambo SATA 1.5 Gb/s Slim DVD ROM SATA 1.5 Gb/s			
Communication				
Network Controller	Integrated 10M/100M/1000M Gigabit Ethernet			

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	ThinkCentre M93	ThinkCentre M83	ThinkCenter M73	ThinkCenter M53
Wireless	2x2 802.11 a/b/g/n with Bluetooth 2x2 802.11 ac/b/g/n with Bluetooth 2x2 802.11 b/g/n with Bluetooth 1x1 802.11 b/g/n			
Slots & Connectors				
Internal Bay	1x2.5"			
External Bay	N/A			
Mini PCIEx1	1			
I/O Ports (Front)				
High Speed USB 3.0	2			1
USB 2.0	0			1
Headphone Combo	1[8]			
Microphone	1			
I/O Ports (Rear)				
High Speed USB 3.0	3[7]	1	N/A	
USB 2.0	0	2	3	
Integrated VGA Port	1			
Integrated Display Port	1			
RJ45	1			
AC-IN	1x65W Adapter AC-IN			
Optional Serial Port	By Optional Cable			
Optional USB 2.0	By Optional Cable			
Optional DP	By Optional Cable		N/A	
HDMI	By Optional Cable		N/A	
Security				
Trust Platform Module (TPM1.2)	Yes		N/A	
USB Individual Disable/ Enable	Yes			
Chassis Intrusion Switch	Yes			
Kensington Slot (In Rear for Attachment of Optional Kensington® Microsaver® Cable)	Yes			
Padlock Loop	No			
Power Supply				
Tiny PC 65W Adapter	External, 65W 88%			
Chassis Dimensions(Tiny with Out VESA Mount Bracket)	Height(mm): 179 Height(inch): 7	Width(mm): 34.5 Width(inch): 1.35	Depth(mm): 182 Depth(inch): 7.1	Weight(kgs): 1.32 Weight(lbs): 2.904
Chassis Dimensions(Tiny with VESA Mount Bracket and ODD Box)	Height(mm): 184 Height(inch): 7.2	Width(mm): 65 Width(inch): 2.55	Depth(mm): 182 Depth(inch): 7.16	Weight(kgs): 2.33 Weight(lbs): 5.14
Environment Attributes				
Temperature	Operating: 10°C- 35°C(50F to 95F) Non-operating Temperature(-40°C - 60°C)(50F to 140F) Wet bulb temperature25°C(max)(Operating) 40°C(max)(Non-Operating)			
Humidity	Operating Humidity20% ~ 80%(Non-condensing) Non-Operating20% ~ 90%(Non-condensing)			
Vibration	With Package1.04 G at 2 to 200 Hz at 1octave/min Operating0.27 G at 5 to 500 Hz at 0.5octave/min,Ramdom(Without LCD Panel) Non-Operating1.04 G at 2 to 200 Hz at 1octave/min			
Shock	Operating Bottom Half-sine Pulse with a Change in Velocity of 37.4cm/sec(14.7 inches/sec) Non-Operating45-G Faired Square Wave with a Velocity Change of 441cm/sec(173.7 inches/sec)			

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Altitude	Operating–15.2 to 3048 m(–50 to 10,000 ft) Storage–15.2 to 10,668 m(–50 to 35,000 ft)			
Preloaded Software (Various by OS and Region)				
Standard	Win 7 OS OOBE with Lenovo EULA IE Favorites ThinkVantage Themes on Win7 Device Experience - ThinkCentre - Lenovo ThinkVantage Tools MS Office 2013 V15.2 SP1 Trail, no JP Nitro PDF Norton Internet Security 2014 - 30 day trial Intel Small Business Advantage Product Recovery ThinkVantage Rescue and Recovery 4.5 (Ready to Install) Password Manager 4.5 - (Ready to Install) ThinkVantage System Update 5.0 Fingerprint SW Acrobat Reader X Desktop Power Manager 3.2 Evernote Lenovo Message Center Plus Lenovo Registration Lenovo Solution Center Skype ThinkVantage Communication Utility Lenovo Reach BlueTooth Security Lock Lenovo SHAREit PCM3.0 PCM3.0 for SCCM View Management Utility 3.0		Win 7 OS Acrobat Reader X Foxit PDF Reader Lenovo Reach Nitro Pro 9 Desktop Power Manager Device Experience - ThinkCentre - Lenovo ThinkVantage Tools Evernote Lenovo Message Center Plus Lenovo Registration Lenovo Solution Center Password Manager Product Recovery Rescue and Recovery® Skype™ ThinkVantage® System Update View Management Utility Cyberlink PowerDVD (Home Basic only) Cyberlink - PowerDVD Create, Power2Go and Power Producer Cyberlink - PowerDVD Create, Power2Go and Power Producer i-Filter IE Favorite (JP Only) Microsoft® Office 2013 Trial ThinkVantage Communication Utility PCM3.0 PCM3.0 for SCCM	Win 7 OS Nitro PDF Microsoft® Office Trial Microsoft Skype Acrobat Reader X EverNote Lenovo Message Center Plus Lenovo Registration Lenovo Solution Center Norton Internet Security 2014 with 30 Days of Virus Protection Thinkvantage Communication Utility View Management Utility Product Recovery ThinkVantage Rescue and Recovery ThinkVantage® System Update Cyberlink-PowerDVD Cyberlink-PowerDVD Create, Power2Go and Power Producer Device Experience-ThinkCenter-Lenovo ThinkVantage Tools JP I-filter Web Link Lenovo User Guide, User Guide Viewer OOBE Customization ThinkVantage Themes Warranty Viewer Help and Support
	Win 8 OS OOBE Customization IE Favorites ThinkVantage Themes on Win8.1 Device Stage - ThinkCentre - Lenovo ThinkVantage Tools MS Office 2013 V15.2 SP1 Trail, no JP Nitro PDF Norton Internet Security 2014 - 30 day trial Intel Small Business Advantage Password Manager 4.5 - (Ready to Install) ThinkVantage System Update 5.0 Fingerprint SW Desktop Power Manager 3.2 Evernote Lenovo Solution Center V2.4 Lenovo Reach Lenovo SHAREit PCM3.0 PCM3.0 for SCCM Lenovo Support Lenovo Companion Lenovo Solution Center BlueTooth Security Lock Nitro Pro 8 Norton Suite Accuweather - Not in CS preload Cyberlink- PowerDVD Cyberlink - PowerDVD Create which contains Power2Go and Power Producer JP - Ifilter (JP only) Downloadable Diagnostics		Win8 OS Amazon Shopping - metro Amazon Shopping - desktop Baidu PC Faster EF EnglishTown Foxit PDF Reader Hightail Cloud Storage - metro Hightail Cloud Storage - desktop Kingsoft App Store Kingsoft Browsers Lenovo Browser Guard Lenovo Reach My Timeline Nitro Pro 9 Pokki Desktop Power Manager PC Device Stage Evernote Lenovo Companion Lenovo Solution Center Norton Internet Security 2014 - 30 days Trial Security Suite Norton Studio Password Manager 4.5 - (Ready to Install) ThinkVantage® System Update Skype™ (Part of OS on Win8.1) Cyberlink PowerDVD Cyberlink - PowerDVD Create, Power2Go and Power Producer i-Filter IE Favorite (JP Only) MS Office 2013 V15.2 SP1 Trail, no JP	Win8 OS Lenovo Companion Lenovo Support Lenovo Reach ShareIT Start Pin Config–ThinkCenter Evernote Norton Internet Security 2014 with 30 Days of Virus Protection Norton Studio MS Office 2013 V15.2 SP1 Trail, no JP Baidu PC Faster Kingsoft Browser Nitro Pro 9 Hightail-Lenovo Cloud Storage-Metro Cyberlink-PowerDVD Cyberlink-PowerDVD Create, Power2Go and Power Producer Fingerprint SW Desktop Power Manager Lenovo Solution Center Lenovo User Guide, User Guide Viewer OOBE Customization Password Manager ThinkVantage® System Update JP i-filter Web Link ThinkVantage Themes Warranty Viewer Help and Support

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CTO	Window 7 & 8 OS Adobe Acrobat XI Adobe Acrobat XI Bundle with Office Adobe Elements V12 (Educational SW) Adobe Digital School Collection V12 (Educational SW) Adobe Photoshop (Non Educational) Adobe Premium Elements V12 (Non Educational) NIS/NAV 2014 - 15,24,36 mo McAfee IS/ VirusScan 2014 - 15,24,26 mo MS Office 2013 JP UEFI/GPT boot in win7 64 bit preloads MS Office 2013 Professional, Home and Business, Home and Student MS Office 2013 JP Personal, Professional, Home and Business Acrobat Acrobat XI with Office bundles (added WIN8 support) Adobe Acrobat XI Standard Edition Standalone Adobe Acrobat XI Professional Adobe Ligthroon V5 Adobe Photoshop Elements and Premium Elements 12 (non-education) McAfee Internet Security and McAfee Virus Scan 2014 Norton Internet Security and Norton Antivirus 2014		Window 7 & 8 OS Adobe Acrobat XI - bundled with MS Office Profressional and MS Office Home and Business Adobe Acrobat XI Standard edition Adobe Acrobat XI Professional Adobe Acrobat Lightroom V5 Adobe Photoshop Elements and Adobe Photoshop/Premiere Elements Bundle - V12 - non education Microsoft Office Professional 2013 Microsoft Office Home and Business 2013 Microsoft Office Home and Student 2013 Microsoft Office Personal 2013 - Japanese Microsoft Office Home and Business 2013 - Japanese Microsoft Office Professional 2013 - Japanese Norton Internet Security - 15 months, 24 months or 36 months Norton AntiVirus - 15 months, 24 months or 36 months McAfee Internet Security - 15 months, 24 months or 36 months McAfee VirusScann Plus - 15 months, 24 months or 36 months	Window 7 & 8 OS Adobe Lightroom V5 Adobe Photoshop V12 Adobe Photoshop &Premium Elements Bundle V12 Norton Internet Security 15 24 or 36 Months-2014 Norton Antivirus 15 24 or 36 Months-2013 McAfee Virus Scan 15 24 or 36 Months-2014 McAfee Internet Security 15 24 or 36 Months-2013 MSOffice Pro, Home&Student, Home&Business 2013 MS Office Personal, Professional, Home&Business 2013-JP Adobe Acrobat XI-bundled with MS Office 2013 Professional and MS Office 2013 Home and Business Adobe Acrobat Professional XI Adobe Acrobat XI Standard English Standalone Adobe Digital School Collection V12 Adobe Photoshop and Premium Elements V12
Certifications				
	Australia/New Zealand - C-Tick EU/EFTA CE Mark & DoC Japan - VCCI Korea - KCC Taiwan - BSMI US/CANADA - FCC China - CEL RoHS/WEEE/REACH EU - Erp Energy Star 6.0 EPEAT PC Green label Japan Energy Saving Law e - Standby Taiwan Green Mark MEPS Green Guard ULE TUV Green Mark Belarus - EAC China - CCC Kazakhstan - EAC Kenya - KEBS Kuwait - KUCAS Mexico - NOM Moldova - INSM Nigeria - SONCAP Russia - EAC Saudi Arabia - SASO Serbia - KVALITET South Africa -NRCS/SABS Ukraine - Ukrsepro or Ukrtest US/CANADA - UL/CUL Uzbekistan - STZ Germany - GS CB report/certificate Indonesia - Postel Taiwan - NCC Singapore - IDA Japan - Type approval	Australia/New Zealand - C-Tick EU/EFTA CE Mark & DoC Japan - VCCI Korea - KCC Taiwan - BSMI US/CANADA - FCC China - CEL RoHS/WEEE/REACH EU - Erp Energy Star 6.0 EPEAT PC Green label Japan Energy Saving Law e - Standby Taiwan Green Mark MEPS Green Guard ULE TUV Green Mark Belarus - EAC China - CCC Kazakhstan - EAC Kenya - KEBS Kuwait - KUCAS Mexico - NOM Moldova - INSM Nigeria - SONCAP Russia - EAC Saudi Arabia - SASO Serbia - KVALITET South Africa -NRCS/SABS Ukraine - Ukrsepro or Ukrtest US/CANADA - UL/CUL Uzbekistan - STZ Germany - GS CB report/certificate Indonesia - Postel Taiwan - NCC Singapore - IDA Japan - Type approval	Australia/New Zealand - C-Tick EU/EFTA CE Mark & DoC Japan - VCCI Korea - KCC Taiwan - BSMI US/CANADA - FCC China - CEL RoHS/WEEE/REACH EU - Erp Energy Star 6.0 EPEAT PC Green label Japan Energy Saving Law e - Standby Taiwan Green Mark MEPS Green Guard Belarus - EAC China - CCC Kazakhstan - EAC Kenya - KEBS Kuwait - KUCAS Mexico - NOM Moldova - INSM Nigeria - SONCAP Russia - EAC Saudi Arabia - SASO Serbia - KVALITET South Africa -NRCS/SABS Ukraine - Ukrsepro or Ukrtest US/CANADA - ETL/CETL Uzbekistan - STZ Germany - GS CB report/certificate Indonesia - Postel Taiwan - NCC Singapore - IDA Japan - Type approval	Australia/New Zealand - C-Tick EU/EFTA CE Mark & DoC Japan - VCCI Korea - KCC Taiwan - BSMI US/CANADA - FCC China - CEL RoHS/WEEE/REACH EU - Erp Energy Star 6.0 EPEAT PC Green label Japan Energy Saving Law e - Standby Taiwan Green Mark MEPS Green Guard Belarus - EAC China - CCC Kazakhstan - EAC Kenya - KEBS Kuwait - KUCAS Mexico - NOM Moldova - INSM Nigeria - SONCAP Russia - EAC Saudi Arabia - SASO Serbia - KVALITET South Africa -NRCS/SABS Ukraine - Ukrsepro or Ukrtest US/CANADA - ETL/CETL Uzbekistan - STZ Germany - GS CB report/certificate Indonesia - Postel Taiwan - NCC Singapore - IDA Japan - Type approval
Footnote				
	Footnote 1: Special Bid Only Footnote 2: Optional Footnote 3: Requires I/O Box on Tiny Footnote 4: Special Bid Only. Available in Q3 2013. Footnote 5: Emerging Market Only Footnote 6: DDR3/DDR3L System Memory I/O Voltage of 1.5V Footnote 7: DP/HDMI/USB2.0/Serial Shared Through One Punchout Port Footnote 8: Nokia and Apple Type Global Headset Autodetect			

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How is TIO powered on?

TIO and Tiny are together turned on by pressing Alt + P on the keyboard.
Moreover, M83 and M53 Tiny can also turned on by pressing the power button positioned on the TIO.

Please refer to below matrix.

	PC power button	ALT-P	Tiny-In-One Power Button
ThinkCentre M53	√	√	√
ThinkCentre M73	√	√	X
ThinkCentre M83	√	√	√
ThinkCentre M93	√	√	X
CTO Bundles (M53,M73,M83,M93)	√	√	√

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